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Tc with AsqTad and p4rhmc, July 20, 2007 Update

Ron Soltz, Pavlos Vranas, Rajan Gupta

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Tc with AsqTad and p4rhmc, July 20, 2007 Update

Background

We present the ongoing analysis of Lattice Quantum Chromodynamics runs on the LLNL BG/L super-computer. This installment adds the density analysis of the p4rhmc for the first few thousand trajectories and the $\psi - \bar{\psi}$ history for hot and cold starts with two values of beta.

P4RHMC Time Histories

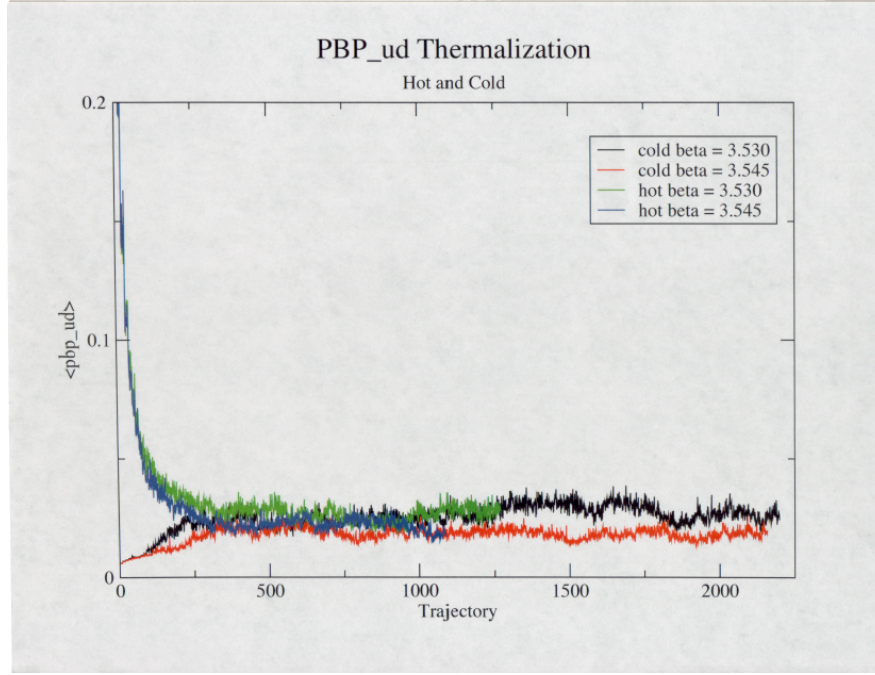


Figure 1: Mean $\psi - \bar{\psi}$ for beta values near T_C with two hot and two cold starts

A P4RHMC analyses

```

1: 826:p4b3.46 100 800
2: 713:dens 37500
3: 4946: dens 3.130000e-03 1 0.07385868991 0.0002232139371 3.43719997747752e-05 7.92437172842451e-05
4: 5743: dens 3.130000e-03 2 -5.56075959345993e-05 3.36817509691821e-05 7.88578343983395e-05 4.59011111111111e-05
5: 5172: dens 3.130000e-03 3 0.2802870826 3.17553100221246e-05 1.90113697514282e-05 2.64847936575111e-05
6: 3941: dens 3.130000e-03 4 -3.563103482 0.01767840351 0.01661834482 0.01488389511
7: 4270: dens 3.130000e-03 8 0.2773513445 0.0002854164431 -0.0001726721643 0.0002724129381
8: 4842: dens 3.130000e-02 1 0.1556318942 0.0001582403674 4.5985389927395e-06 4.47922315885092e-06
9: 5670: dens 3.130000e-02 2 -4.67442205012347e-06 1.79638708055408e-05 3.87978733791022e-05 1.57311111111111e-05
10: 5175: dens 3.130000e-02 3 0.2787272552 2.2528011396402e-05 -1.16029716693944e-06 1.30465822168111e-05
11: 4219: dens 3.130000e-02 4 -2.526710927 0.001670127475 -0.0006344905631 0.0004681974001
12: 5148: dens 3.130000e-02 8 0.277343106 5.67554427334725e-05 5.27636805554923e-05 3.64941359709111e-05

```

13: 2339: c_2 3.130000e-03 -0.1077235544 0.08835707808
14: 2978: dens_pbp 3.130000e-03 0.04357662705 0.002641254714
15: 2650: chi_dis 3.130000e-03 276.9608892 16.84963199
16: 2663: chi_con 3.130000e-03 2.102231054 0.1276870999
17: 2589: chi_tot 3.130000e-03 279.0631203 16.9758008
18: 2332: c_2 3.130000e-02 0.01456516893 0.01504289213
19: 2996: dens_pbp 3.130000e-02 0.09182281757 0.005559423575
20: 2589: chi_dis 3.130000e-02 1229.286777 74.4586619
21: 2734: chi_con 3.130000e-02 1.490759447 0.09025088884
22: 2660: chi_tot 3.130000e-02 1230.777537 74.54883578
23: 2924: c11 3.130000e-03 3.130000e-03 -0.9534868691 0.1847140985
24: 2958: c11 3.130000e-03 3.130000e-02 -0.2205754886 0.06931661509
25: 2963: c11 3.130000e-02 3.130000e-02 -0.1177167098 0.03079873375
26: 1645: c2q -0.5417476862 0.3536686007
27: 1668: c2B -0.1772799762 0.05475088895
28: 1604: c2Q 0.1781662915 0.01283404338
29: 1625: c2I 0.7380397603 0.04729758986
30: 0:
31: 829:p4b3.49 100 800
32: 705:dens 43000
33: 4928: dens 2.900000e-03 1 0.05301024785 0.0002525913841 5.58802966003587e-05 6.32774916995091e-05
34: 5476: dens 2.900000e-03 2 1.97562851670715e-05 3.290508455307e-05 -4.223459020043e-06 3.472040e-06
35: 5225: dens 2.900000e-03 3 0.2802203336 2.32210847918671e-05 -1.53047282396535e-05 1.6856336478e-05
36: 4011: dens 2.900000e-03 4 -3.831261408 0.02104081051 -0.001046663541 0.01405794665
37: 4307: dens 2.900000e-03 8 0.2742081459 0.0002668679488 -0.0001150514627 0.0001976974126
38: 4826: dens 2.900000e-02 1 0.1317099973 0.0001700162467 2.99037613573135e-05 3.5279877669022e-05
39: 5688: dens 2.900000e-02 2 8.00445199263443e-07 1.80074584930208e-05 -4.94710854076918e-06 1.33e-06
40: 5270: dens 2.900000e-02 3 0.2790094498 1.78665501543416e-05 -3.73488686967408e-06 9.883710362e-06
41: 4189: dens 2.900000e-02 4 -2.613525924 0.001907240987 0.0001163617662 0.0004487892501
42: 5243: dens 2.900000e-02 8 0.2760762098 7.93265662316335e-05 -3.11969385872501e-05 3.4965261362e-05
43: 2368: c_2 2.900000e-03 0.05697783979 0.05744119553
44: 2979: dens_pbp 2.900000e-03 0.03236090712 0.001685167434
45: 2636: chi_dis 2.900000e-03 147.7661713 7.790076961
46: 2666: chi_con 2.900000e-03 2.338851441 0.1219606238
47: 2651: chi_tot 2.900000e-03 150.1050228 7.908258978
48: 2376: c_2 2.900000e-02 0.05915212051 0.008114991371
49: 2991: dens_pbp 2.900000e-02 0.08040435884 0.004170760499
50: 2604: chi_dis 2.900000e-02 911.0162472 47.30034901
51: 2724: chi_con 2.900000e-02 1.595466407 0.08274315128
52: 2645: chi_tot 2.900000e-02 912.6117136 47.38293414
53: 2858: c11 2.900000e-03 2.900000e-03 -0.6390802674 0.116374652
54: 2925: c11 2.900000e-03 2.900000e-02 -0.184190165 0.03766697786
55: 2989: c11 2.900000e-02 2.900000e-02 -0.09163062013 0.01478342315
56: 1734: c2q -0.006983418251 0.2272429552
57: 1702: c2B -0.09270586637 0.03345275668
58: 1586: c2Q 0.2007102244 0.01202857278
59: 1593: c2I 0.7530359469 0.04200393403
60: 0:
61: 822:p4b3.51 100 800
62: 712:dens 27500

63: 4854: dens 2.590000e-03 1 0.0401004707 0.0003107333472 6.41584355218583e-05 8.85809593351321e-05
 64: 5667: dens 2.590000e-03 2 4.38002842518366e-05 4.41533195837226e-05 4.36738976882418e-05 3.969
 65: 5167: dens 2.590000e-03 3 0.2803724394 2.88350311957685e-05 2.08805307181416e-05 2.6002054642
 66: 3933: dens 2.590000e-03 4 -4.102742982 0.03959038107 0.01773900311 0.01755012149
 67: 4592: dens 2.590000e-03 8 0.2720838539 0.0002988891409 8.24338094539328e-05 0.0003483203678
 68: 4881: dens 2.590000e-02 1 0.1130401445 0.0001891065634 9.90365793347717e-06 4.94706622763667e-06
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 70: 5224: dens 2.590000e-02 3 0.2793627582 2.01576304460025e-05 -1.20204116803679e-05 1.5098447792
 71: 4257: dens 2.590000e-02 4 -2.700840898 0.002964006406 -0.0002826609993 0.0007720949871
 72: 5163: dens 2.590000e-02 8 0.2746847419 8.69972080529305e-05 5.48603025245131e-05 5.14344872957
 73: 2249: c_2 2.590000e-03 0.116767093 0.04653309691
 74: 2984: dens_pbp 2.590000e-03 0.02132615942 0.001866121783
 75: 2630: chi_dis 2.590000e-03 73.71256169 6.523103656
 76: 2661: chi_con 2.590000e-03 2.181913313 0.1913346503
 77: 2570: chi_tot 2.590000e-03 75.894475 6.708816345
 78: 2352: c_2 2.590000e-02 0.07779661594 0.01124418156
 79: 2916: dens_pbp 2.590000e-02 0.0601168041 0.005240902271
 80: 2645: chi_dis 2.590000e-02 584.5912868 50.99160563
 81: 2683: chi_con 2.590000e-02 1.436356296 0.1252065789
 82: 2652: chi_tot 2.590000e-02 586.0276431 51.11666952
 83: 2963: c11 2.590000e-03 2.590000e-03 -0.4133899113 0.09407650321
 84: 2987: c11 2.590000e-03 2.590000e-02 -0.1179633744 0.03749866493
 85: 3014: c11 2.590000e-02 2.590000e-02 -0.07951484572 0.01904221292
 86: 1539: c2q 0.1849550604 0.182009487
 87: 1689: c2B -0.03755398424 0.02716189212
 88: 1568: c2Q 0.178486142 0.01648986218
 89: 1602: c2I 0.6469240974 0.05805639001
 90: 0:
 91: 825:p4b3.54 100 800
 92: 705:dens 20500
 93: 4900: dens 2.400000e-03 1 0.01946543436 0.0003773116945 2.02333337548243e-05 9.11148135492605e-05
 94: 5567: dens 2.400000e-03 2 -3.848361585073e-05 4.13269821404141e-05 2.38384206150773e-05 3.6704
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 98: 4902: dens 2.400000e-02 1 0.09230585755 0.0001998966275 2.11003506473275e-05 6.45333072005406e-05
 99: 5672: dens 2.400000e-02 2 -4.51072411030381e-06 2.81959815613147e-05 1.35602530497238e-05 2.4
 100: 5125: dens 2.400000e-02 3 0.2796685646 2.1473375731417e-05 -3.16126500186145e-05 1.8355941937
 101: 4184: dens 2.400000e-02 4 -2.818725399 0.004955375789 -0.0005169562011 0.000708201024
 102: 4873: dens 2.400000e-02 8 0.2697560036 0.0001499211484 6.93667365574226e-05 5.51531860821701e-05
 103: 2293: c_2 2.400000e-03 0.2068417418 0.03698171772
 104: 3029: dens_pbp 2.400000e-03 0.008901875471 0.001138943231
 105: 2634: chi_dis 2.400000e-03 15.03559931 1.988458086
 106: 2687: chi_con 2.400000e-03 2.290589967 0.2907465715
 107: 2645: chi_tot 2.400000e-03 17.32618927 2.264335753
 108: 2267: c_2 2.400000e-02 0.1297950083 0.02040063611
 109: 2965: dens_pbp 2.400000e-02 0.04221304461 0.005340344686
 110: 2626: chi_dis 2.400000e-02 335.1988956 42.42413248
 111: 2600: chi_con 2.400000e-02 1.28905125 0.1630690142
 112: 2653: chi_tot 2.400000e-02 336.4879469 42.58704501

113: 2975: c11 2.400000e-03 2.400000e-03 -0.1893247398 0.05796902955
114: 2890: c11 2.400000e-03 2.400000e-02 -0.1073093953 0.0344136572
115: 2957: c11 2.400000e-02 2.400000e-02 -0.0843686856 0.02725364336
116: 1581: c2q 0.3703570532 0.1150829383
117: 1642: c2B 0.01550388462 0.01906385364
118: 1607: c2Q 0.1833291769 0.02335853034
119: 1591: c2I 0.6030082234 0.07673275192
120: 0:
121: 828:p4b3.57 100 800
122: 700:dens 20000
123: 4569: dens 2.120000e-03 1 0.01042301762 0.0002387525297 0.0001040263549 6.51312477382512e-05
124: 5705: dens 2.120000e-03 2 -2.52053630006725e-05 3.06225682255356e-05 -2.01531532865078e-05 2
125: 5207: dens 2.120000e-03 3 0.2804843936 3.04979589097566e-05 1.27182618943539e-05 2.184130319
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127: 4552: dens 2.120000e-03 8 0.2624803283 0.0001540502958 7.38993841191546e-05 0.0001205067537
128: 4876: dens 2.120000e-02 1 0.07369238169 0.0002231560317 6.0369782538137e-05 5.06639325936667e
129: 5752: dens 2.120000e-02 2 -2.86484164838854e-05 2.30648227889695e-05 -2.60163425910552e-05 2
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131: 4196: dens 2.120000e-02 4 -2.878384502 0.003825598294 0.0002505618502 0.0005456446682
132: 4931: dens 2.120000e-02 8 0.2662859385 0.0001361423328 -1.90757817264078e-06 6.4225089251695
133: 2228: c_2 2.120000e-03 0.2458544093 0.0356523017
134: 3091: dens_pbp 2.120000e-03 0.004690357929 0.0006224185459
135: 2577: chi_dis 2.120000e-03 4.25515635 0.591965577
136: 2661: chi_con 2.120000e-03 1.932273226 0.2535277406
137: 2702: chi_tot 2.120000e-03 6.187429576 0.8335570118
138: 2235: c_2 2.120000e-02 0.1865923338 0.0263063763
139: 2921: dens_pbp 2.120000e-02 0.03316157176 0.00433682243
140: 2522: chi_dis 2.120000e-02 210.245648 27.5173999
141: 2674: chi_con 2.120000e-02 1.295273026 0.1693578934
142: 2583: chi_tot 2.120000e-02 211.540921 27.68655046
143: 2930: c11 2.120000e-03 2.120000e-03 -0.1104551403 0.03423357881
144: 2996: c11 2.120000e-03 2.120000e-02 -0.07484700255 0.02385049761
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146: 1655: c2q 0.4649005569 0.08658757331
147: 1625: c2B 0.04646133411 0.01365810904
148: 1607: c2Q 0.1901801848 0.02491485075
149: 1625: c2I 0.6021639589 0.07888918166
150: 0:
151: 822:p4b3.60 100 800
152: 706:dens 30500
153: 5205: dens 1.920000e-03 1 0.007194487513 6.30219446525084e-05 -1.116605110551e-05 4.69998830
154: 5657: dens 1.920000e-03 2 2.78114599285021e-06 1.86521475939969e-05 -7.75900870306432e-06 1.4
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156: 3995: dens 1.920000e-03 4 -3.652543197 0.0202838021 0.002677478977 0.002279721301
157: 5206: dens 1.920000e-03 8 0.2615819198 7.72251228284371e-05 6.06588804199118e-05 4.748960624
158: 4966: dens 1.920000e-02 1 0.06173285571 0.0001010639091 -1.59351744959258e-05 4.184999503410
159: 5695: dens 1.920000e-02 2 4.19838960530189e-06 1.84871352162539e-05 -2.28439643113081e-06 1.2
160: 5216: dens 1.920000e-02 3 0.2800980241 2.07192661297882e-05 -1.50742553178029e-05 1.29129505
161: 4126: dens 1.920000e-02 4 -2.85285277 0.002386047801 -0.000417534017 0.0003968213047
162: 5151: dens 1.920000e-02 8 0.264301629 8.76523782865728e-05 -7.71851758518123e-06 3.217972232

163: 2280: c_2 1.920000e-03 0.3385344541 0.02653132047
164: 3098: dens_pbp 1.920000e-03 0.003980556616 0.0003083892279
165: 2685: chi_dis 1.920000e-03 2.471515568 0.1953608739
166: 2631: chi_con 1.920000e-03 2.02087431 0.1559688578
167: 2702: chi_tot 1.920000e-03 4.492389878 0.3501015228
168: 2266: c_2 1.920000e-02 0.2843121504 0.02230623561
169: 2991: dens_pbp 1.920000e-02 0.03415547344 0.002629880564
170: 2641: chi_dis 1.920000e-02 181.3869266 13.97575184
171: 2660: chi_con 1.920000e-02 1.578422639 0.1215141603
172: 2648: chi_tot 1.920000e-02 182.9653493 14.09713306
173: 2997: c11 1.920000e-03 1.920000e-03 -0.06336015119 0.01109947304
174: 3072: c11 1.920000e-03 1.920000e-02 -0.04508527914 0.009173389637
175: 3019: c11 1.920000e-02 1.920000e-02 -0.0448177499 0.009141577343
176: 1648: c2q 0.6832548342 0.05602993384
177: 1704: c2B 0.08976114992 0.008125536636
178: 1612: c2Q 0.2387544447 0.01842156816
179: 1613: c2I 0.7404290595 0.05712926499
180: 0:
181: 825:p4b3.63 100 800
182: 706:dens 21500
183: 5276: dens 1.700000e-03 1 0.005338559118 4.94804488495711e-05 5.80343342533845e-05 5.23202817
184: 5686: dens 1.700000e-03 2 -2.61686298802039e-05 2.1519719653112e-05 -3.77285663431942e-06 1.6
185: 5228: dens 1.700000e-03 3 0.2805570302 2.71057574418698e-05 -4.73080256390891e-07 1.71705075
186: 4051: dens 1.700000e-03 4 -3.119029588 0.0220395788 -0.001353764129 0.001659849128
187: 4800: dens 1.700000e-03 8 0.2609460394 0.0001027041202 4.57224226943048e-05 4.6519797181142e-
188: 4919: dens 1.700000e-02 1 0.05026301797 0.0001165825887 5.86557812332947e-05 5.0918925002156
189: 5655: dens 1.700000e-02 2 -3.05184787920516e-05 2.24685863431509e-05 7.9920015840959e-07 1.6
190: 5234: dens 1.700000e-02 3 0.2802532088 2.70898691882384e-05 2.54979599736392e-07 1.657788508
191: 4191: dens 1.700000e-02 4 -2.782578261 0.002598461414 0.0004947107211 0.0004265925746
192: 4849: dens 1.700000e-02 8 0.2625560253 0.0001053530986 9.38626931813888e-05 3.8999421677618e-
193: 2315: c_2 1.700000e-03 0.2951580687 0.03556595968
194: 3096: dens_pbp 1.700000e-03 0.002514088887 0.0002995253943
195: 2655: chi_dis 1.700000e-03 1.157020886 0.1392144232
196: 2637: chi_con 1.700000e-03 1.468845329 0.174777619
197: 2695: chi_tot 1.700000e-03 2.625866215 0.3135851476
198: 2293: c_2 1.700000e-02 0.2643596531 0.03191149694
199: 2979: dens_pbp 1.700000e-02 0.02367037474 0.002812161198
200: 2558: chi_dis 1.700000e-02 102.351166 12.16679813
201: 2653: chi_con 1.700000e-02 1.310400227 0.1556577165
202: 2623: chi_tot 1.700000e-02 103.6615662 12.32234523
203: 2997: c11 1.700000e-03 1.700000e-03 -0.04118358556 0.01208313845
204: 3002: c11 1.700000e-03 1.700000e-02 -0.03956173693 0.01149312491
205: 2988: c11 1.700000e-02 1.700000e-02 -0.04060389022 0.01123028779
206: 1656: c2q 0.5895661325 0.07377654463
207: 1586: c2B 0.08159652567 0.0110960071
208: 1607: c2Q 0.2068976561 0.02461434254
209: 1610: c2I 0.6314997229 0.07512952292
210: 0:
211: 831:p4b3.69 100 800
212: 705:dens 34000

213: 5273: dens 1.500000e-03 1 0.004039332242 9.67030788137432e-06 1.43429328015565e-05 3.6623309
214: 5682: dens 1.500000e-03 2 4.62483150031338e-07 1.71991959018095e-05 -6.16920195558381e-06 1.1
215: 5157: dens 1.500000e-03 3 0.2804745979 1.80550500173124e-05 -4.0514879406301e-06 1.3442063296
216: 4156: dens 1.500000e-03 4 -2.689734894 0.005727544678 0.0001281384347 0.000323817282
217: 5183: dens 1.500000e-03 8 0.2604414916 5.33586702902174e-05 -2.16871376803425e-05 2.15985399
218: 5258: dens 1.500000e-02 1 0.03963284572 3.54324746674619e-05 1.46046170697678e-05 3.59423998
219: 5708: dens 1.500000e-02 2 -2.0339548412913e-06 1.69514157161792e-05 -8.39842359687371e-06 1.1
220: 5141: dens 1.500000e-02 3 0.2802691163 1.81230893480026e-05 -2.5914711546731e-06 1.330202409
221: 4552: dens 1.500000e-02 4 -2.579938262 0.001625499833 -4.20528607327315e-06 0.0001639138254
222: 5212: dens 1.500000e-02 8 0.2612164492 5.08614644506487e-05 -1.93063442506033e-05 2.024860756
223: 2213: c_2 1.500000e-03 0.3630261166 0.0251026811
224: 3086: dens_pbp 1.500000e-03 0.002316675845 0.0001570926188
225: 2767: chi_dis 1.500000e-03 0.8051539372 0.05470286903
226: 2649: chi_con 1.500000e-03 1.542642071 0.1045922253
227: 2701: chi_tot 1.500000e-03 2.347796009 0.1592656157
228: 2284: c_2 1.500000e-02 0.3453153245 0.02387418457
229: 2967: dens_pbp 1.500000e-02 0.02273060269 0.001540527605
230: 2628: chi_dis 1.500000e-02 77.49303667 5.253327491
231: 2672: chi_con 1.500000e-02 1.479670474 0.1002777565
232: 2668: chi_tot 1.500000e-02 78.97270714 5.353579588
233: 3062: c11 1.500000e-03 1.500000e-03 -0.04973414904 0.009937239852
234: 3061: c11 1.500000e-03 1.500000e-02 -0.04787902414 0.009666845075
235: 3031: c11 1.500000e-02 1.500000e-02 -0.0475799735 0.009489282599
236: 1587: c2q 0.7167716246 0.0522198016
237: 1534: c2B 0.10287504 0.008389111359
238: 1506: c2Q 0.25642147 0.01738829155
239: 1558: c2I 0.7757863822 0.0526084561
240: 0:
241: 829:p4b3.76 100 800
242: 704:dens 51000
243: 5171: dens 1.390000e-03 1 0.003386392958 4.3858824343036e-06 -4.110188253707e-05 2.6172606874
244: 5608: dens 1.390000e-03 2 -7.9577046647247e-06 1.26253197291404e-05 1.6506195673801e-05 7.019
245: 5237: dens 1.390000e-03 3 0.2804262301 1.30188312432444e-05 -2.69232784459428e-06 9.48582637
246: 4232: dens 1.390000e-03 4 -2.435174709 0.002906930695 -0.0002337811612 0.0001447737712
247: 5190: dens 1.390000e-03 8 0.2602511517 4.36250386386014e-05 3.97425740719564e-05 1.5515776494
248: 5298: dens 1.390000e-02 1 0.03359256734 2.05407659023028e-05 -3.98023705767932e-05 2.59096602
249: 5681: dens 1.390000e-02 2 -7.8499408697891e-06 1.25876139947001e-05 1.62006415729382e-05 6.97
250: 5191: dens 1.390000e-02 3 0.2802682875 1.30310722785725e-05 -3.06317576929114e-06 9.399105378
251: 4852: dens 1.390000e-02 4 -2.389995442 0.001011935971 2.02728353497169e-05 6.81477479397309e-
252: 5140: dens 1.390000e-02 8 0.260705411 4.46488478806864e-05 3.36100745117661e-05 1.46341448635
253: 2286: c_2 1.390000e-03 0.4092020503 0.01780478792
254: 3408: dens_pbp 1.390000e-03 0.002141395547 9.19484176058335e-05
255: 2778: chi_dis 1.390000e-03 0.6238415779 0.02682441309
256: 2746: chi_con 1.390000e-03 1.539889889 0.06611611926
257: 2761: chi_tot 1.390000e-03 2.163731467 0.09292996364
258: 2316: c_2 1.390000e-02 0.3967481074 0.01727568789
259: 3036: dens_pbp 1.390000e-02 0.02124235876 0.0009117941644
260: 2626: chi_dis 1.390000e-02 61.38166903 2.635514168
261: 2730: chi_con 1.390000e-02 1.511320647 0.06486759368
262: 2675: chi_tot 1.390000e-02 62.89298968 2.700366658

263: 3015: c11 1.390000e-03 1.390000e-03 -0.03549423938 0.00561421398
264: 3080: c11 1.390000e-03 1.390000e-02 -0.03498851772 0.005557361588
265: 3063: c11 1.390000e-02 1.390000e-02 -0.03498039341 0.005536594208
266: 1590: c2q 0.8203109083 0.0369692933
267: 1645: c2B 0.1232978815 0.005950814831
268: 1606: c2Q 0.2831928173 0.01217218288
269: 1509: c2I 0.85389834 0.03670155376
270: 0:
271: 877:p4c3.525 100 800
272: 702:dens 22000
273: 4592: dens 2.400000e-03 1 0.03135040406 0.0003481697007 4.63775830156134e-05 0.0001036895977
274: 5704: dens 2.400000e-03 2 2.49609431669062e-05 4.64518451408666e-05 -8.35639434820971e-05 4.4
275: 5193: dens 2.400000e-03 3 0.2803311096 2.76003416724036e-05 -3.72711753319321e-05 2.049335675
276: 3932: dens 2.400000e-03 4 -4.358004089 0.04844146145 0.01788514632 0.02211814239
277: 4308: dens 2.400000e-03 8 0.2694758391 0.0003897481454 -0.0006733390223 0.0003393556368
278: 4759: dens 2.400000e-02 1 0.100582406 0.000220465296 9.83772478092252e-06 7.02817592535059e-0
279: 5710: dens 2.400000e-02 2 -2.49667430409892e-06 2.65831233551355e-05 -2.3138601889649e-05 2.2
280: 5280: dens 2.400000e-02 3 0.2794997279 2.39762951918938e-05 -1.78744493393845e-05 1.365704756
281: 4202: dens 2.400000e-02 4 -2.756975165 0.004070399887 0.0002271477749 0.0006262442214
282: 4909: dens 2.400000e-02 8 0.2729902597 0.0001601398464 -1.56601273010854e-05 4.77231608237245
283: 2278: c_2 2.400000e-03 0.1167333514 0.04800763546
284: 2989: dens_pbp 2.400000e-03 0.01496269285 0.001732750583
285: 2628: chi_dis 2.400000e-03 40.47345458 4.752327477
286: 2679: chi_con 2.400000e-03 2.079956497 0.2408707207
287: 2652: chi_tot 2.400000e-03 42.55341108 4.985942991
288: 2335: c_2 2.400000e-02 0.08769231992 0.01623261631
289: 2989: dens_pbp 2.400000e-02 0.04800523923 0.005534938939
290: 2632: chi_dis 2.400000e-02 415.3788642 47.91844462
291: 2669: chi_con 2.400000e-02 1.315829056 0.1516985263
292: 2663: chi_tot 2.400000e-02 416.6946932 48.06997822
293: 2959: c11 2.400000e-03 2.400000e-03 -0.3694692754 0.09740801812
294: 2933: c11 2.400000e-03 2.400000e-02 -0.1333905405 0.03782114056
295: 3007: c11 2.400000e-02 2.400000e-02 -0.08356517673 0.02451694816
296: 1585: c2q 0.1353542366 0.1817926403
297: 1565: c2B -0.03501014818 0.027130755
298: 1612: c2Q 0.1715209076 0.02058650899
299: 1601: c2I 0.6029359783 0.07127133812
300: 0:
301: 873:p4c3.530 100 800
302: 706:dens 21500
303: 4832: dens 2.400000e-03 1 0.0275182744 0.0006837543315 7.96537002791784e-05 8.8145828468314e-
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305: 5221: dens 2.400000e-03 3 0.2804232473 4.07185542249005e-05 -3.04003784770769e-05 2.45690492
306: 4004: dens 2.400000e-03 4 -4.578574526 0.09610297903 -0.01513734268 0.01748810928
307: 4132: dens 2.400000e-03 8 0.2682763614 0.00033209273 0.0002756602807 0.0002473854623
308: 4873: dens 2.400000e-02 1 0.09803947261 0.0003227629892 6.57573339263456e-05 5.2916180723142e
309: 5706: dens 2.400000e-02 2 1.35486406047956e-05 2.55168957649307e-05 -1.90331479515499e-06 1.9
310: 5107: dens 2.400000e-02 3 0.27962288 3.43280592663883e-05 1.37167917225399e-05 1.837348698913
311: 4117: dens 2.400000e-02 4 -2.778089715 0.00577529967 0.001016555481 0.0008665093666
312: 4940: dens 2.400000e-02 8 0.2722960393 0.0001805371871 -1.38564017986084e-05 5.88398927423584

313: 2304: c_2 2.400000e-03 0.2166853809 0.03979947421
314: 2934: dens_pbp 2.400000e-03 0.01295918736 0.00157218092
315: 2619: chi_dis 2.400000e-03 31.15873563 4.013574575
316: 2661: chi_con 2.400000e-03 2.156189166 0.2600305088
317: 2644: chi_tot 2.400000e-03 33.31492479 4.236606436
318: 2269: c_2 2.400000e-02 0.1122294359 0.01530117076
319: 2994: dens_pbp 2.400000e-02 0.04616975164 0.005486247464
320: 2581: chi_dis 2.400000e-02 389.4559749 46.3308403
321: 2663: chi_con 2.400000e-02 1.308286435 0.1554253546
322: 2658: chi_tot 2.400000e-02 390.7642614 46.48587664
323: 2970: c11 2.400000e-03 2.400000e-03 -0.1779990566 0.06295347038
324: 2965: c11 2.400000e-03 2.400000e-02 -0.03963828672 0.0246757449
325: 2996: c11 2.400000e-02 2.400000e-02 -0.05592494452 0.01434196054
326: 1564: c2q 0.5006400307 0.1341616542
327: 1612: c2B 0.03203606308 0.01802311154
328: 1582: c2Q 0.1768103045 0.02143174003
329: 1604: c2I 0.6113698184 0.07372158037
330: 0:
331: 878:p4c3.535 100 800
332: 707:dens 22500
333: 4976: dens 2.400000e-03 1 0.02396304956 0.0003132973573 -4.26800457507704e-06 9.655649694809
334: 5698: dens 2.400000e-03 2 1.74853063846225e-05 5.00895763962031e-05 -9.83184832192891e-05 4.9
335: 5147: dens 2.400000e-03 3 0.2803979833 3.01985792039115e-05 2.2528693525709e-06 2.9149818384
336: 3962: dens 2.400000e-03 4 -4.767950493 0.05363966285 0.01336132994 0.01436491374
337: 4236: dens 2.400000e-03 8 0.2669124428 0.0002812653181 0.0001258076408 0.0001927212797
338: 4986: dens 2.400000e-02 1 0.09560031656 0.0001509742365 -6.66713777876346e-05 6.492683186465
339: 5720: dens 2.400000e-02 2 1.90777606444068e-05 2.55561294855002e-05 -4.88865374755889e-05 2.3
340: 5237: dens 2.400000e-02 3 0.2796146698 2.40338864083712e-05 -3.18668106561399e-06 1.800073915
341: 4204: dens 2.400000e-02 4 -2.793428562 0.003794573429 0.0006205079485 0.0006557514562
342: 4848: dens 2.400000e-02 8 0.2712519136 0.000141710048 8.78476707868186e-06 4.69953376707397e-
343: 2345: c_2 2.400000e-03 0.07234854057 0.09951959121
344: 2965: dens_pbp 2.400000e-03 0.01158214062 0.001305650757
345: 2630: chi_dis 2.400000e-03 23.98108567 2.757627216
346: 2666: chi_con 2.400000e-03 2.304509405 0.2593383269
347: 2641: chi_tot 2.400000e-03 26.28559507 3.006617406
348: 2274: c_2 2.400000e-02 0.1044902417 0.01693481514
349: 2992: dens_pbp 2.400000e-02 0.04620681967 0.005174678532
350: 2582: chi_dis 2.400000e-02 379.9909703 42.5674821
351: 2665: chi_con 2.400000e-02 1.350157138 0.1511995584
352: 2635: chi_tot 2.400000e-02 381.3411275 42.71857431
353: 2906: c11 2.400000e-03 2.400000e-03 -0.4782614334 0.2039656665
354: 2945: c11 2.400000e-03 2.400000e-02 -0.1917447903 0.06116627521
355: 2931: c11 2.400000e-02 2.400000e-02 -0.1102230858 0.02616923082
356: 1663: c2q -0.1277585591 0.3933795977
357: 1694: c2B -0.06806263234 0.05729651739
358: 1635: c2Q 0.1793889557 0.02156438499
359: 1599: c2I 0.6229585145 0.07133532347
360: 0:
361: 874:p4c3.540 100 800
362: 701:dens 21000

363: 4972: dens 2.400000e-03 1 0.02074958088 0.0002918290345 -2.24449061375075e-06 7.722819421386
 364: 5653: dens 2.400000e-03 2 8.04278276915344e-06 3.76966745047591e-05 -5.21121826971037e-06 4.1
 365: 5261: dens 2.400000e-03 3 0.2804347379 4.16484452544339e-05 -4.05637682587157e-05 2.62486873
 366: 4010: dens 2.400000e-03 4 -4.848869393 0.06033795302 0.003087864967 0.01113774332
 367: 4546: dens 2.400000e-03 8 0.2651320987 0.0002000422888 2.03390479766052e-05 0.0002337795152
 368: 4848: dens 2.400000e-02 1 0.09288674237 0.000149560826 1.36083910961203e-05 5.20239242055173
 369: 5703: dens 2.400000e-02 2 1.16959858190557e-05 2.58834170221743e-05 -1.05373183676445e-05 2.4
 370: 5253: dens 2.400000e-02 3 0.2796537034 3.78635356119426e-05 -1.48109389786723e-05 1.64373273
 371: 4118: dens 2.400000e-02 4 -2.808378979 0.0036498342 0.0007434219116 0.0008496797807
 372: 4854: dens 2.400000e-02 8 0.2701487449 0.0001027892213 2.76072421563911e-05 4.68956530430026
 373: 2279: c_2 2.400000e-03 0.1841006785 0.03339426044
 374: 3051: dens_pbp 2.400000e-03 0.009633733979 0.001187891256
 375: 2620: chi_dis 2.400000e-03 17.27483692 2.170053764
 376: 2601: chi_con 2.400000e-03 2.25126079 0.2772060223
 377: 2648: chi_tot 2.400000e-03 19.52609771 2.437721358
 378: 2244: c_2 2.400000e-02 0.1231376028 0.0176982989
 379: 2945: dens_pbp 2.400000e-02 0.04312598753 0.00528393399
 380: 2611: chi_dis 2.400000e-02 344.5868413 42.23064801
 381: 2617: chi_con 2.400000e-02 1.3038902 40.1597520689
 382: 2641: chi_tot 2.400000e-02 345.8907316 42.39031069
 383: 2951: c11 2.400000e-03 2.400000e-03 -0.2574508141 0.05900639477
 384: 2954: c11 2.400000e-03 2.400000e-02 -0.1087181287 0.02884207098
 385: 2991: c11 2.400000e-02 2.400000e-02 -0.09157047975 0.02100217923
 386: 1606: c2q 0.2816957198 0.1051968419
 387: 1707: c2B 0.001827987587 0.01609883061
 388: 1612: c2Q 0.1852511947 0.02289760067
 389: 1591: c2I 0.6256521711 0.07711295324
 390: 0:
 391: 879:p4c3.545 100 800
 392: 706 :dens 17000
 393: 4974: dens 2.400000e-03 1 0.01841779174 0.0004284635864 -5.88280661206351e-05 6.930487452825
 394: 5646: dens 2.400000e-03 2 -5.92723544924705e-06 5.84648892490251e-05 2.42121902611869e-06 3.1
 395: 5235: dens 2.400000e-03 3 0.2805012296 3.29346952926817e-05 -1.05565695001888e-05 3.08554454
 396: 4123: dens 2.400000e-03 4 -4.836459572 0.08995566155 -0.007815596068 0.008649011068
 397: 4316: dens 2.400000e-03 8 0.2649599262 0.0002374169675 -0.0001349817143 0.0001799675375
 398: 4945: dens 2.400000e-02 1 0.09065479157 0.0002170152234 -1.86003078112209e-05 5.838502390388
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 402: 4817: dens 2.400000e-02 8 0.2695703601 0.0001512561143 6.1440334087196e-05 4.08679382857486e-
 403: 2283: c_2 2.400000e-03 0.2209290444 0.03933762418
 404: 3015: dens_pbp 2.400000e-03 0.007312946721 0.001211891042
 405: 2570: chi_dis 2.400000e-03 11.68905333 1.99141369
 406: 2673: chi_con 2.400000e-03 1.920358948 0.3171363907
 407: 2651: chi_tot 2.400000e-03 13.60941228 2.291996864
 408: 2247: c_2 2.400000e-02 0.1223312022 0.02142601571
 409: 3001: dens_pbp 2.400000e-02 0.03599528489 0.005908229171
 410: 2621: chi_dis 2.400000e-02 280.7090647 46.08953611
 411: 2659: chi_con 2.400000e-02 1.117911354 0.1834816642
 412: 2669: chi_tot 2.400000e-02 281.8269761 46.27289959

413: 2891: c11 2.400000e-03 2.400000e-03 -0.086352076 0.03151606664
414: 2948: c11 2.400000e-03 2.400000e-02 -0.05488354114 0.0155589144
415: 3009: c11 2.400000e-02 2.400000e-02 -0.06155631789 0.01665034869
416: 1490: c2q 0.4887842327 0.10096092
417: 1638: c2B 0.04089668142 0.01152640943
418: 1608: c2Q 0.1616182353 0.02661638909
419: 1602: c2I 0.5282101649 0.08694713336
420: 0:
421: 875:p4c3.550 100 800
422: 711:dens 17500
423: 4555: dens 2.400000e-03 1 0.01807852661 0.0003031687606 2.00215654512069e-05 0.0001041000923
424: 5669: dens 2.400000e-03 2 9.99208546760271e-06 3.45766642213979e-05 3.54187431073907e-05 2.97
425: 5153: dens 2.400000e-03 3 0.280436433 3.23339653075924e-05 1.24295922416798e-05 3.13679809288
426: 4028: dens 2.400000e-03 4 -4.834541216 0.06761317535 0.0001280238108 0.01197210897
427: 4254: dens 2.400000e-03 8 0.2654398963 0.0002576541888 -0.0001614047379 0.000198158223
428: 4934: dens 2.400000e-02 1 0.08966619546 0.0001533908739 5.51467532295553e-05 5.70463731243962
429: 5621: dens 2.400000e-02 2 2.12072648905901e-05 2.7193531079493e-05 -8.01126303670695e-06 2.32
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431: 4114: dens 2.400000e-02 4 -2.792812713 0.003677403137 -0.001422102474 0.001097075933
432: 4945: dens 2.400000e-02 8 0.2699641573 0.0001216933094 -8.82292947384273e-05 4.9483432257818
433: 2298: c_2 2.400000e-03 0.2125570657 0.03613776888
434: 3039: dens_pbp 2.400000e-03 0.007360542977 0.001164782484
435: 2628: chi_dis 2.400000e-03 11.50096917 1.848785543
436: 2687: chi_con 2.400000e-03 1.968348924 0.3109651798
437: 2640: chi_tot 2.400000e-03 13.46931809 2.150163694
438: 2266: c_2 2.400000e-02 0.1245231148 0.02093071076
439: 2973: dens_pbp 2.400000e-02 0.03650695101 0.005745718113
440: 2610: chi_dis 2.400000e-02 281.5820955 44.32501434
441: 2672: chi_con 2.400000e-02 1.137073747 0.1789563811
442: 2650: chi_tot 2.400000e-02 282.7191693 44.50391279
443: 3027: c11 2.400000e-03 2.400000e-03 -0.08787617903 0.02857156799
444: 3002: c11 2.400000e-03 2.400000e-02 -0.04878852184 0.01831309641
445: 2884: c11 2.400000e-02 2.400000e-02 -0.05032199709 0.016420543
446: 1656: c2q 0.4594613647 0.09068907365
447: 1634: c2B 0.04046489148 0.01147245304
448: 1543: c2Q 0.156872147 0.02480060044
449: 1591: c2I 0.5129903103 0.08105774813